

or the principles of surgery, nor any sign of a really scientific method of study, yet they are replete with practice and practical procedures. With Cheselden as his master, Warner as his immediate pupil, and Hunter as his "pupil by tradition," Sharp becomes interesting as the connecting link between the old and modern surgery.

Very justly is Sharp thus highly esteemed as a surgeon. But none the less justly may ophthalmologists claim him as one of their most learned and progressive pioneers, and as one of the most brilliant ornaments to ophthalmic surgery. It is fitting, therefore, that his life and work be recalled and a registry made of them in the present-day annals of ophthalmology.

212 FRANKLIN STREET.

THE IMPORTANCE OF THE STUDY OF THE HISTORY OF MEDICINE.*

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Between ancient and modern historians two essential points of difference are readily observable. While the former make no use of critical research and confine themselves chiefly to contemporary events, to what they themselves have seen, perhaps participated in, or at least learned from eye-witnesses, with the latter research work is a conspicuous and essential feature, and there is no limit as to the period dealt with. Nothing does so much credit to modern culture, or has been so fruitful of results, as the improvement seen in the methods of historical study. Until a comparatively quite recent period, it was true that under the name of history was accepted almost everything that had been handed down from earlier times, no matter how contradictory to sense and reason it might be. The same absurdities—such, for instance, as the suckling of Romulus and Remus by a wolf—were repeated generation after generation, and everyone accepted implicitly and literally the story of the Garden of Eden. From this undigested mass our historical iconoclasts have sifted out all such chaff and subjected the remainder to the most searching and critical study,

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with the result that we may feel reasonably certain that what remains represents actual occurrences. By the careful study of original authorities, of manuscripts, inscriptions, tablets, excavations, etc., they have gotten as near as possible to contemporary sources; that is, to the events themselves. And while we must acknowledge our limitations and feel that all human knowledge is in the nature of the case fallible, even that which we acquire from eye-witnesses, and still more so that which is handed down through many ages, the thought that we have exhausted all available sources of information and removed all obvious error places the subject upon a much higher plane, and gives us a sense of confidence and mental repose which is a very gratifying exchange for that blind belief in everything which formerly prevailed among the unlearned, or that distrust and disbelief which characterized the mental condition of the few who were real scholars. History may, therefore, now be said to have assumed something of the attitude of an exact science, and we are warranted in accepting it as the basis for philosophical deductions.

Now, since history is ever repeating itself, it is manifestly the part of wisdom to make it the object of our closest study, that we may profit by its lessons, both of success and of failure; for what others have done or have failed to do should point the way to their successors, whether in search of individual, social or national guidance. And what is true of history in general must be equally true of it in particular; the principles of the one are no less applicable to the other, of the whole to the part. The same evolution is seen in both; there is the same devious, uncertain path of human progress—now a sudden leap forward, now a halt, now an attempt to surmount or to find a way around some opposing hill, now a purposeless wandering hither and thither over the plain, now actually a retrogression. “It is, unfortunately, but too certain,” says the learned Adams¹ “that there is a tendency in the human mind at certain times to retrograde, as well as in others to advance, both in knowledge and virtue.” May not a study of the chart of progress teach us, or at least give us hints, how to make these leaps, to avoid these arrests, to surmount these obstructions, to escape this purposeless wandering, or to shun the greater humiliation of actual loss of ground?

It is a remarkable fact that the great Father of Medicine, 2,400 years ago, almost at the very beginning laid down the only

¹The Genuine Works of Hippocrates. Translated by Francis Adams. London, 1849. Vol. 2, p. 521.

true principles of progress—principles that, under the name “inductive method,” were falsely claimed for Lord Bacon 2,000 years later—and that all real advance has been coincident with their observance. When the profession has gone astray or fallen back it was in consequence of their neglect, and more than once our art has been revived by restoring them to their place as our guides. It seems to be an imperative condition of our life and progress that we should be ever impressing upon ourselves that there is no royal road to knowledge, medical or other, and that he who would attain to its hidden treasure must be satisfied to dig deep into the everlasting hills without other guide than the uncertain chart left by those who in still greater darkness have previously delved therein. Everyone who has studied the history of medicine to any extent must realize the importance of this precaution.

Now, if I am justified in claiming that medical history is but a part of general history and, as such, entitled to the same consideration, it certainly must strike us as strange that the two should be held in such different estimation in our system of education. No subject is considered of more importance in the literary courses of our universities. As evidence of this, I find from the register of students attending the present session of the Johns Hopkins University, which I presume may be considered as representative, that the number of those pursuing historical study is exceeded in only two other departments, *i. e.*, English and Chemistry, while it exceeds, and mostly far exceeds, those taking Mathematics, Physics, Geology, Zoölogy, Latin, Greek, Romance Languages, Sanscrit, Political Economy and Philosophy. On the other hand, it is rare to find the subject even mentioned in the curricula of the medical schools.

I have been at some pains to ascertain to what extent the history of medicine is taught in this country, and with this object in view, have written the Deans of fourteen of our leading universities which have medical departments for information. I append a table made up from the meagre replies received from the following: Harvard, Yale, Cornell, Buffalo, Columbia, New York, Pennsylvania, Johns Hopkins, Maryland, Virginia, Tulane, Chicago, Michigan and Minnesota. From this it appears that a full course of lectures, fourteen to sixteen in number, is attempted in but three, *viz.*: Universities of Pennsylvania, Maryland and Minnesota. There are four “lectureships,” one just established and still without an incumbent, and another held jointly with a “Clinical Professorship of Dermatology.” One of the “courses”

NAME	ARE LECTURES DELIVERED	BY WHOM	TO WHOM	CHARACTER OF THE COURSE	IS IT COMPULSORY	WHEN BEGUN	IS THERE A MEDICO- HISTORICAL SOCIETY	IS THERE A MEDICAL LIBRARY	ATTENDANCE AT LECTURE COURSE
Harvard	No...	.....	.....	.....	.....	.....	No...	No...	Course attempted, no interest shown; abandoned.
Yale	Yes...	Prof. of Therapeu- tics.	Junior Class..	5 or 6 lectures....	No...	.....	No...	10,000*	.....
Cornell	No...	.....	.....	.....	.....	.....	No...	Yes...	.....
New York	No...	.....	.....	.....	.....	.....	No...	No...	.....
Columbia	No...	Lecturer on Hist.	4th Year Class	16; 1 Weekly for half session.	Yes...	1892	Yes†	14,100	Well attended. No examina- tion.
Pennsylvania	Yes...	Lecturer on Hist. of Med.	.....	.....	.....	.....	No...	1,500	.....
Virginia	No...	.....	.....	.....	.....	.....	No...	1,800	.....
Chicago	Yes...	Lecturer on Hist. of Med.	Jun. and Sen. Classes.	.....	No...	.....	No...	10,796	Just founded. Course not yet begun.
Michigan	No...	.....	.....	.....	.....	.....	No...	10,000	.....
Tulane	No...	.....	.....	.....	.....	.....	No...	Over 12,000	.....
Johns Hopkins	Yes...	Lecturer on Hist. of Med.	Students Generally	3 lectures.....	No...	1893	Yes...	3,500	.....
Maryland	Yes...	Prof. of Hist. of Med.	Students Generally	14 lectures.....	No...	1903	No...	8,000	Historical society largely at- tended by students.
Buffalo	Yes...	Assistants in Sur- ger.	Sophomore Class	More or less, on Hist. of Surg.	No...	.....	No...	4,500	Small attendance.
Minnesota	Yes...	Lecturer on Hist. of Med.	Senior Class	16 lectures.....	No...	1897	No...	6,255	.....
.....	.....	.....	.....	.....	.....	.....	.....	3,500	Attended by one-half the class.

* Part of the University Library.
† Small, and limited to graduates.

consists of three lectures! There is but one professorship, and that an "honorary" one. In two institutions "some" instruction is given by the Professor of Therapeutics and the Assistants in Surgery, respectively; in the latter case only in surgery. In one, and that one, strange to say, Harvard, lectures were attempted, but "no great interest was shown" and they were discontinued. There is no uniformity in those receiving instruction; sometimes it is the sophomores, sometimes the juniors or seniors, and sometimes any that *choose* to attend. In but one is the claim made that the course is compulsory. In none is there any examination. One can readily imagine what the attendance must be under such circumstances, and the experience of Harvard is instructive. However, according to the table, in three cases it is "good," "one-half of the class" and "poor," respectively. The table gives the size of the medical libraries attached to the universities. And, finally, I would call your attention to that very useful auxiliary, the medico-historical society. There are two of these, but as one is limited to a dozen graduates, is not attended by the students and takes no part in their instruction, it does not concern us here. The other is the excellent Historical Club of the Johns Hopkins Hospital, founded in 1890 upon a very broad basis, and which has exercised a profound influence not only locally, but throughout the entire country. Many able papers have been read before it, and there are few who have any claims to distinction in this field in the United States who have not been its guests.

Let me, in passing, point out the error of a statement by Prof. Roswell Park of Buffalo, the author of a very interesting course of historical lectures delivered before the University of Buffalo and published in 1897, viz., that his was "the first attempt in the medical schools of this country to give systematic instruction in the history of the science."² For, over three-quarters of a century ago the far-seeing "Sage of Monticello" provided for the teaching of the history of medicine in his great University (Virginia), and the course of lectures there delivered by the late Prof. Robley Dunglison was published in 1872.³ As appears from the table, there is no course on the subject at that institution at the present time.

²Dedication of his: *An Epitome of the History of Medicine*, *Phil.*, 1897.

³*History of Medicine from the Earliest Ages to the Commencement of the Nineteenth Century*. By Robley Dunglison, M.D., LL.D. Arranged and Edited by Richard J. Dunglison, M.D. *Phil.*, 1872.

Now, I do not believe that anyone who possesses a broad and genuine culture, and whose opinion is, therefore, worth considering, will hesitate for a moment to acknowledge that the facts above given indicate a shocking neglect, an inexcusable apathy on the part of our medical schools. Where is our boasted intelligence and superiority, that we do not perceive the folly and danger of such a course; folly in that we are willing to deprive our young graduates of the accumulated wisdom and experience of all the ages; danger in that we turn them loose without the salutary checks and restraints that such studies afford? "No man," says Lord Macaulay,⁴ "who is correctly informed as to the past will be disposed to take a morose or desponding view of the present." The fact is, we of this age are too much carried away with the rage for novelty. Nothing is esteemed of consequence but that which contains something new. But in catching at the new how often we risk losing that which is old, well-grounded and far better. Haste is stamped on everything, and this is particularly true of Americans. We scarcely attain to one point of vantage when, without rest, we rush on to the next. We allow ourselves no enjoyment of anything; indeed, scarcely time for reflection. We seem to be drifting more and more into mere machines, mere worshipers of physical science. Yet, hear the warning words of Prof. Du Bois-Reymond: "Where physical science reigns exclusively, the intellect becomes poor in ideas, the fancy in images, the soul in sensibility, and the result is a narrow, hard and dry disposition, forsaken of the Muses and Graces; and not only so, but physical science leads down by imperceptible gradations from the highest efforts of human intellect to mere mechanical work that looks at nothing beyond gain."⁵ Without doubt, we need constant infusions of what the Germans call "the science of antiquity," as a corrective to this mechanical tendency. Here is an opportunity for some *laudator temporis acti*. We must not permit ourselves to be severed from the high ideals and the inspiration that come from a contemplation of the examples, the lives, the achievements, of the great men of the past.

Especially do we need to take deep and frequent draughts from the writings of the great Father, to whose genius we owe an everlasting debt. What a sublime figure he offers to our view! In an age of theory, how free from theorizing! Though one of the

⁴History of England, Vol. 1, Page 2.

⁵Quoted in: Essays and Studies. By Basil L. Gildersleeve. Baltimore, 1890.

priestly caste, how untainted by superstition! Familiar with the natural course of diseases, he was in a position to gauge the true value of remedies, and acquired a wonderful prevision of results. Not content with general impressions, he closely observed and carefully recorded individual diseases at the bedside, and relied only on such experience to direct him to the proper management of his cases. Conscious of the limitations of his knowledge and of the tendency of the human mind to err, he wisely confined himself to the guidance of each case and to the relief of symptoms. Above all things, he was cautious to do no harm. And scarcely less inspiring are the work and lives of his successors. What an anachronism and an oasis in the anatomical desert seems the story of those old Alexandrians, Herophilus and Erasistratus, with their human dissections and vivisections! With what fine judgment and choice language Celsus sums up the knowledge of his day, and what a concise and admirable enumeration he gives of the qualifications demanded of the surgeon! How we linger over his descriptions of lithotomy (the "Celsian operation"), alopecia ("*area*" and "*kerion Celsi*"), and ligation of the arteries! What learning and literary fecundity are exhibited by Galen, "the first experimental physiologist," and what a high conception of professional morals he possessed! What graphic and inimitable pictures of disease Aretæus, the Cappadocian, has drawn! What surprises await us in the work of the first gynecologist, Soranus of Ephesus! What a strange work that is of the great Byzantine surgeon and obstetrician, Paul of Ægina, in the seventh century, when his genius alone lit up the darkness of his age! What romance there is about the days of the Arabian cithern player of Bagdad, Abú Becr Mohammed Ibn Zacariyá Ar-Rází, commonly known among us as Rhazes, who gave that famous description of smallpox! What a fine delineation of the surgeon is that given by old Guy de Chauliac, "the earliest herald of the modern surgery," in 1363, and with what surprise we learn that so high an ideal could be upheld in an age which we are accustomed to look upon as so barbarous! I cannot refrain from giving it to you: "Let the surgeon," he says, "be well educated, skilful, ready and courteous. Let him be bold in those things that are safe, fearful in those things that are dangerous; avoiding all evil methods and practices. Let him be tender with the sick, honorable to men of his profession, wise in his predictions, chaste, sober, pitiful, merciful; not covetous or extortionate, but rather

let him take his wages in moderation, according to his work, and the wealth of his patient, and the issue of the disease and his own worth.”⁶ How few realize that picture, even in our own far more enlightened day! What an interesting story that is of the great barber surgeon, Ambroise Paré, of how, in 1552, he was led to substitute the ligature for the cautery in amputation, and of the glorious fight he made against the pouring of that horrible boiling oil into the poor soldiers’ wounds! And who does not shudder to recall Michael Servetus, the discoverer of the pulmonary circulation, burning at the stake, and strangely, by the hands of a fellow-protestant? And what a grand rôle is that of Vesalius who, while Francis and Charles were turning the world upside down with their wars, was quietly turning anatomy upside down with his scalpel! And how familiar to every student are the names of Eustachius, Fallopius, Arantius, Varolius, Sylvius, Fabricius ab Aquapendente and Cæsalpinus! And how many of us are aware that the great astronomer Copernicus, and Rabelais, the greatest wit of that most witty nation, the French, were practicing physicians?

And not long after these there came the greatest of them all, Harvey, whose name is imperishably connected with the discovery of the circulation. It is not so well known, perhaps, that he established also the truth of the doctrine of the origin of all animals from the egg—“*Ovum esse primordium commune omnibus animalibus.*”⁷ I shall have something further to say of the first of these presently. Listen to some well-known names of the same century: Havers, Naboth, Pacchioni, Cowper, Bartholin, de Graaff, Malpighi, Meibomius, Wirsung, Aselli, Highmore, Steno, Glisson, Nuck, Spigelius, Brunner, Wharton, Peyer, Willis and Vieussens, all incorporated into our anatomical nomenclature. Then there were: Borelli, who explained all physiology on mechanical principles; Sanctorius, who weighed himself in a balance for thirty years, and thus determined the amount of the insensible perspiration; Mauriceau, the first great obstetrician; Morel, the discoverer of the tourniquet; Baglivi, the author of the celebrated saying, “He who diagnosticates well, cures well;” Sydenham, the “English Hippocrates,” who refused to be bound by the theories of his day; Locke, the philosopher; and the sublime writer, Sir Thomas Browne.

⁶Paget (S.). Life of Paré, 1897. Page 2.

⁷*Exercitationes de Generatione Animalium.*

Boerhaave is preëminent in the next century, the creator of no school, but selecting from all sources those things that appealed most to his reason and intelligence; a man of tireless industry, who held his priority as much, perhaps, through his high character as his exalted talents. We must single out also the name of Jenner, at the close of the century, as that of one of the world's greatest benefactors. And are not the following names in our mouths every day: Basedow, Valsalva, Santorini, Winslow, Soemmering, Levret, Gimbernat, Scarpa, Galvini, Goulard, Meckel, Monro, Pott, Anel, Tenon, Petit, Dover, Heberden, Lieberkuhn, Portal, Reil, Gasser, Descemet, Belloc and Chopart? Prominent, also, were Stephen Hales, the experimental investigator; Haller, the author of the doctrine of irritability; John Hunter, the founder of modern scientific surgery; Morgagni, the founder of pathological anatomy; Auenbrugger, the inventor of percussion; Bichat, the founder of general anatomy; James Currie, of cold water fame; Sprengel and Freind, historians; Oliver Goldsmith, poet; and the American, Rush.

And what a great period that was for progress and research which has just closed, the nineteenth century, which we would fain believe to be the greatest of them all! No longer now do the anatomists predominate, but there is development in many directions. The specialties all come to the front. Clinical teaching and work are conspicuous. More exact methods and instrumental aids of all sorts are introduced. All the sciences are called on to contribute. Auscultation and percussion, improved microscopes, the ophthalmoscope, laryngoscope, endoscope, and specula of various sorts, the thermometer, electricity, the X-ray apparatus. etc., open new fields to our vision and multiply our diagnostic resources. With the discovery of anesthesia, surgery takes a great bound forward, acquiring a further acceleration of speed upon the discovery of antiseptics. Pathology and histology are cultivated with increasing success, and the new science of bacteriology is created. What an array of names one can call up—Corvisart, Lænnec, Louis, Bright, Addison, Hodgkin, Bennet, Wunderlich, Skoda, Trousseau, McDowell, Mott, Astley Cooper, Esmarch, Wells, Paget, Langenbeck, Billroth, Strohmeyer, Lister, Simpson, Récamier, Sims, Semmelweis, Hebra, Magendie, Broca, Bernard, Charles Bell, Marshall Hall, Charcot, Helmholtz, Beer, Donders, Graefe, Pinel, Griesinger, Erb, Weir Mitchell, Czermak, Türck, Bayle, Virchow, Cohnheim, Klebs, Rokitsansky, Koch, Laveran, Walter Reed, Pasteur!

In this rapid survey my only object has been to show you at a glance, as it were, how rich our past has been in example and inspiration. I have thrown but a few pictures upon the historical canvas. I might have increased the number to a thousand, but these are sufficient for my purpose. Now, I would ask, are our young students to be deprived of all the benefits of a knowledge of these, our medical heroes—these men who, as Plato said, have “handed on the torch of life from generation to generation?” Is there nothing in such lives for them—nothing that will help them onward and upward in their professional career? Is education to be for them merely a mastering of the dry details of anatomy, physiology, practice? Is there to be no attempt to direct motives, to strengthen conscience, to build up character? I tell you again there is danger in such a course.

There are two other thoughts suggested by this survey. One is that there has been no degeneration in these latter days. Where do we find higher patterns of all that is noble and inspiring than in Pasteur, Virchow, or Lister? Nay, we do not have to go beyond the limits of our own city to find those who are the peers of any whom I have named, great leaders in medical progress, beacon lights among us for all time to come.

Another thought is the solidarity of our art. Although differing in importance, each age has contributed something of permanent value to it; each stage of progress is indissolubly bound to all other stages. “What we know and what we think,” says Foster,⁸ “is not a new fountain gushing fresh from the barren rock of the unknown at the stroke of the rod of our own intellect; it is a stream which flows by us and through us, fed by the far-off rivulets of long ago.” In the house that we are building each stone, each brick, each arch, has its place, contributing to the strength and symmetry of the structure. Nor because we are living on the sixth floor can we be indifferent to what is going on in the first or second. We stand, as it were, upon the shoulders of our predecessors, and it would be very little to our credit if we did not see further than they; but to imagine, as some appear to do, that they were blind and saw nothing, indicates a very shallow knowledge, and a judgment warped by the greater relative size of near objects. It would be interesting to know whether posterity will assign to us the precedence that we think is our due.

⁸Lectures on the History of Physiology. *Cambridge, 1901.*

But not only do we profit by the high ideals and the inspiration of great lives which we derive from the past, but it is of the greatest practical benefit to trace the history of great researches. Let us review for a few moments that which led to the discovery of the circulation of the blood.

Before the days of Harvey—in the previous century—the lesser or pulmonary circulation had been clearly enunciated by Servetus and Realduus Columbus, and both lesser and greater circulations had been described by Cæsalpinus. But these views seem to have been purely theoretical; there is no evidence that they were based upon direct observation or experiment, and they made no impression on contemporary sentiment. The old Galenic doctrine was still held by Harvey's teacher, the great anatomist of Padua, Fabricius ab Apuapendente, at the beginning of the seventeenth century. The blood was still supposed to pass in part by invisible pores through the septum of the ventricles, and this was the only connection acknowledged between the venous and the arterial blood. There were, in fact, two distinct and independent circulations: the venous blood, with its natural spirits derived from the liver, passing out from the right ventricle along the veins to the tissues, and the thin arterial blood, containing the innate heat of the heart and the vital spirits derived from the lungs, in like manner proceeding from the left ventricle, both by a to-and-fro movement. The idea held of the action of the heart was just the reverse of the truth. The active period (the systole) corresponding with the impulse was supposed to be that of dilatation, when the air and blood were assumed to be drawn into the left and right ventricles, respectively, by the suction force thereby exerted. Harvey did away entirely with the "spirits," because he could find no evidence of their existence in his researches. He denied the pores in the septum of the heart for the same reason, and taught that all the blood passes through the lungs. He ascertained the action of the auricles and ventricles, with their respective valves. He realized that the active period of the heart was that of contraction upon its contents, and that the blood was thereby driven into the arteries, producing the pulse. He calculated carefully the amount of this blood passing out from the heart at each systole, and thus found that in a few minutes as much must pass as is contained in the whole body; that is, that all the blood passes through the heart. It was also obvious that the amount was far greater than that which is absorbed by the veins from the food and drink, previously considered its sole source,

and that the far greater part must be blood which has passed from the arteries to the veins in the tissues, in some such hidden manner as it does in the lungs. Harvey never saw the capillaries, either in the lungs or elsewhere; he had only a logical evidence of their existence. Their discovery was reserved for Malpighi and the microscope.

Fact after fact arose to confirm Harvey's views: that the heart was emptied when the vena cava was tied, and filled to distention when the aorta was tied; that a moderate ligation of a limb made it swell with venous blood, but a tight one kept the blood from entering by compressing the arteries; that the whole of the blood in the body could be drained away by opening a vein; that the valves of the veins (discovered by his master, Fabricius, but misinterpreted by him) were designed to prevent reflux of blood in its passage onward to the heart. Harvey's solution of the circulation was a purely mechanical one, based on patient anatomical examination and comparison of various animals, on the adoption of some explanation for what he saw, and the confirmation of this explanation by repeated dissection, vivisection and experiment—in other words, on true Hippocratic principles.⁹ Who will say that it is a matter of indifference whether such a work be brought to the attention of students or not?

Again, medical literature is a mine of neglected and overlooked discoveries. Take, for example, club-foot, both the true nature and successful treatment of which were known to Hippocrates, but were lost for many ages after his death. Says Adams:¹⁰ "In all the works on ancient surgery, I verily believe there is not a more wonderful chapter than the one which relates to club-foot. In it he has not only stated correctly the true nature of this malformation, but he has also given very sensible directions for rectifying the deformity in early life. Now, it appears to me a lamentable reflection, as proving that valuable knowledge, after being discovered, may be lost again to the world for many ages, that not only did subsequent authorities, down to a very recent period, not add anything to the stock of valuable information which he had given on the subject, but the important knowledge which he had revealed to the profession came to be disregarded and lost sight of, so that, until these last few years" [he refers to the introduction of tenotomy by Strohmeier and Delpech] "talipes was regarded as one of the *opprobria medicinæ*." Hippocrates was also acquainted with dis-

⁹See Foster. *Loc. cit.*

¹⁰*Loc. cit.* Vol. 2, page 559.

location of the acromial end of the clavicle, the knowledge of which was entirely lost until within the eighteenth century.¹¹ According to Celsus, lithotripsy, which held so prominent a place in the surgery of the latter part of the last century, was invented and practiced by Ammonius of Alexandria, about B. C. 230.¹² Heliodorus, about A. D. 100, was well acquainted with torsion of arteries, a particular mode of operating for the radical cure of hernia by excision of the sac, and excision of stricture of the urethra—all of which have been proclaimed as marvelous discoveries in later days.¹³ You all remember the statement of the late Dr. T. Gaillard Thomas, which formed the theme of my predecessor's Presidential Address last year, that more had been done for the advancement and growth of medicine in the last half of the last century than in all the preceding ages from the days of Hippocrates. Yet hear the acknowledgment of the author of the statement in his well-known work on "The Diseases of Women;"¹⁴ "Some of the most valuable contributions to modern gynecology will be found to be foreshadowed, or even plainly noticed, by the writers of a past age, and afterward entirely overlooked;" and he cites as examples the use of the uterine sound, sponge-tents, dilatation of the constricted cervix, and even the speculum itself. The history of the last-named instrument, upon which modern gynecology is based, is exceedingly instructive. Employed habitually by Paul of Ægina in the latter half of the seventh century, A. D., and furnishing him with an excellent knowledge of diseases of the uterus, it was forgotten by his successors until rediscovered by Récamier and introduced to the profession in 1818.

But it is probable that we may learn equally as much from the follies, omissions and failures of the past as from its successes and achievements. Experience will always be fallacious and judgment difficult, and it is not likely that error can ever be avoided. It is well for us to realize that the future may pluck many a feather from even our ambitious wings, who plume ourselves on our attainments. It is not impossible that some Praxagoras of Cos may hereafter open the abdomen for the relief of obstruction of

¹¹Baas (J. H.): *Outlines of the History of Medicine*. Trans. by H. E. Handerson. *New York*, 1889.

¹²Celsus. *De Medicina*, vii, 26.

¹³Billings (J. S.). In: *System of Surgery*. Edit. by F. S. Dennis. *Phil.*, 1895. Vol. 1, page 30.

¹⁴Thomas (T. G.). *A Practical Treatise on the Diseases of Women*. 6 Ed. *Phil.*, 1891. Page 17.

the bowels 2,200 years before men shall think the example worth following; that some Celsus may confound veins and arteries, although this same Praxagoras shall have known of their differences 400 years earlier; that some Aretæus shall have heard a "bruit" in heart disease, but the hint lie dormant many centuries; that this same close observer shall describe the crossing of the nerves and its effects 1,400 years before a Willis appears to beat it into men's brains; that men shall believe that arteries contain only air, although experience be continually teaching that they contain blood; that they shall believe that there are pores in the septa of the heart, although the utmost effort of vision fail to detect them; that some Massaria shall rather be wrong with Galen than right with anyone else; that men shall have practiced ligation of arteries for hemorrhage for centuries before a Paré teach them to apply it in amputation; that surgery shall be turned over to the barbers; that mesmerism and hypnotism shall have another periodic discovery under some new name; that some Sylvius shall teach that the whole art of medicine consists in the administration of acids and alkalies, some Cullen that all pathology is referable to spasm, some Broussais that we must seek it only in inflammation; that some Auenbrugger's epoch-making discovery of percussion shall have to wait for the coming of a Corvisart; that some Brown shall slay his thousands with whiskey and opium, some Rasori his ten thousands with the lancet and tartar emetic; that those will be found to combat blindly the unanswerable logic of the germ theory, and even to persist in their opposition when the germs themselves shall be placed before their eyes; that they shall fight against the obstetrical forceps, cinchona and antiseptics. We may smile at the suggestion of such possibilities, the list of which could be very much lengthened, yet some of them have actually occurred not so very long ago; and what has been, or its like, will with certainty of fate be again. He only is wise who realizes this fact, listens to the wholesome confessions of the past and is ever on his guard.

Let us now sum up some of the advantages of the study of medical history that have been pointed out in this address:

1. It teaches what and how to investigate.
2. It is the best antidote we know against egotism, error and despondency.
3. It increases knowledge, gratifies natural and laudable curiosity, broadens the view and strengthens the judgment.

4. It is a rich mine from which may be brought to light many neglected or overlooked discoveries of value.

5. It furnishes the stimulus of high ideals which we poor, weak mortals need to have ever before us; it teaches our students to venerate what is good, to cherish our best traditions, and strengthens the common bond of the profession.

6. It is the fulfilment of a duty—that of cherishing the memories, the virtues, the achievements, of a class which has benefited the world as no other has, and of which we may feel proud that we are members.

Having now shown the value—nay, I should rather say the necessity—of the study of medical history, I shall conclude with a few words regarding its teaching. So important a branch should receive the highest consideration. It should be taught in no desultory fashion, but as thoroughly as any other. There should be a full chair of the history of medicine in every university. A systematic course of reading should be required in addition to the lectures, which should be not less than sixteen to twenty in number. It should be made a subject of examination, for all experience proves that in no way can the attendance of the students be enforced. The time is near at hand when the standing of universities will be judged by their attitude to this branch, and when it will be assigned a front rank in the curriculum.

FROM HIPPOCRATES TO GALEN.*

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For thousands of years medicine was an undigested collection of experimental notions, vaguely described, disfigured by tradition, and often made useless by superstition and ignorance. The earlier medical history is entirely legendary, and to Greek writers must be given the credit of compiling and systematizing the most interesting and most significant remains of the history of medicine of antiquity.

In the description of medicine as pictured in the Homeric Poems, we find that Chiron, the Centaur, introduced the art of medicine among the Greeks, and educated Æsculapius, a Thes-

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